



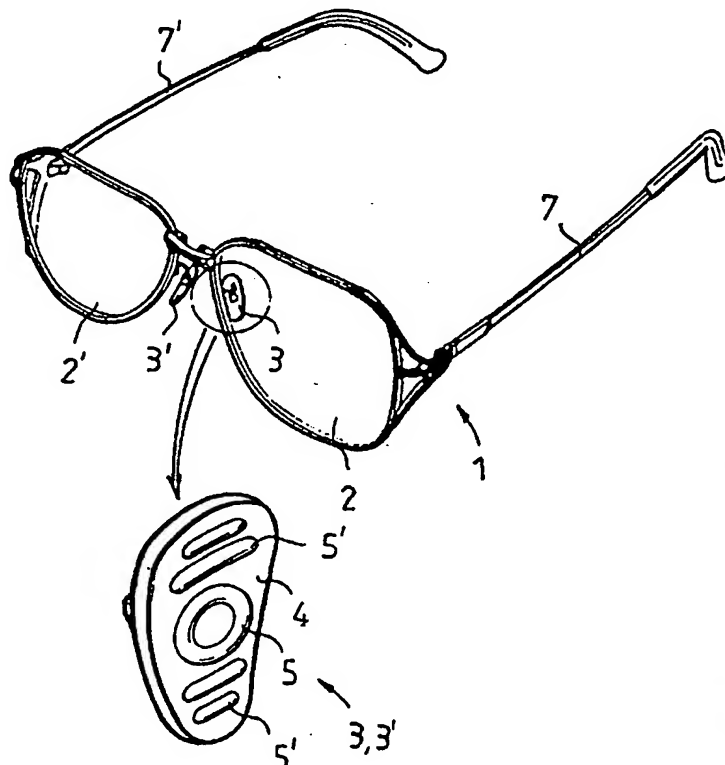
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: NOSEPIECE OF EYEGLASSES HAVING AIR POCKETS

## (57) Abstract

The present invention relates to air pockets (5, 5') on the nosepieces (3, 3') for eyeglasses or spectacles having a function of preventing pain and slippage from the nose, and more particularly to a device capable of enhancing cushioning effect of nosepiece (3, 3') so that wearer's comfortability is heightened in an effective way. Furthermore the present invention has advantages capable of improving the comfortability of the eyeglasses when one wears eyeglasses and preventing slippage and pains caused by oppressing on the nose. Accordingly, an object of the present invention is to provide air pockets (5, 5') on nosepieces (3, 3') for enhancing cushioning effect and preventing slippage from the nose. The air pockets (5, 5') on nosepieces (3, 3') consist of silicone or soft synthetic resin on cushion pad (4) of the inner surface of nosepieces (3, 3') for the comfortable feeling and no slippage from the nose configured as protruding air pockets (3, 3') on the surface of cushion pad (4). The air pockets (3, 3') formed on cushion pad (4) are configured so that the protruded air pockets (3, 3') can slightly wrap the skin of nose partially and circulate the fresh air through the gap of air pockets.



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## Nosepiece of eyeglasses having air pockets

### Technical Field

5 The present invention relates to a pair of nosepieces for eyeglasses or spectacles having a function of preventing pain and slippage from the nose, and more particularly to a device capable of enhancing cushioning effect of nosepiece so that wearer's comfortability is heighten in an effective way.

### 10 Background Art

Generally, in order to prevent slippage or dropping of eyeglasses due to its own weight or shock from human face, a pair of nosepieces combined with earpieces in eyeglasses frame has important role for fixing the eyeglasses on human face. A conventional  
15 eyeglasses consists of earpieces having crooked end part, a front eyeglass frame of a size and shape to fixedly support a pair of lenses and frame having a centrally located nosepiece positioned rearward of frame.

From a view of human feeling, a pair of nosepieces as a parts  
20 of eyeglasses is very important because the weight of eyeglasses causing uncomfortable sense by oppressive force on the upper part of human nose is concentrated and transmitted though it. Accordingly most wearer of eyeglasses are nervous and disturbed by the stress caused by uncomfortable feeling of nosepieces. Usually the depressed  
25 markings by nosepieces on the skin of nose appear after wear of eyeglasses. In the case of hardness, the sensitive skin on the upper part of nose is damaged due to friction or compression between the nose skin and nosepieces of glasses.

Furthermore, most eyeglasses have a tendency to slip down  
30 from the nose due to gravity of glasses or motion of head. The tendency of slippage to slide down the nose is increased when the wearer bows forward. The design of earpieces, namely temple of glasses, does not hold eyeglasses in place when the wearer's skin becomes oily or wet, which is one reason why head straps are used  
35 for sports.

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In prior arts, hinge pieces between nosepiece and frame or synthetic materials for the cushion pad of nosepieces have been studied for the comfortability and holding the eyeglasses on human face. But up till now, the nosepiece of eyeglass lacks for removing  
5 disturbance or enhancing the comfortability with the nosepieces.

For the above mentioned reasons, more flexible and comfortable nosepieces having a function of preventing slippage is necessary for reducing uncomfortable feeling in the nose.

## 10 Disclosure of Invention

The present invention has advantages capable of improving the comfortability of the eyeglasses when one wears eyeglasses and preventing slippage and pains caused by oppressing on the nose. Accordingly, an object of the present invention is to provide air  
15 pockets on nosepieces for enhancing cushioning effect and preventing slippage from the nose.

## Brief Description of Drawings

Figure 1 is a perspective view of a device in accordance with  
20 an embodiment of the present invention.

Figure 2 is a longitudinal sectional view of Figure 1.

Figure 3 is a longitudinal sectional view of a device in accordance with another embodiment of present invention.

Figure 4 is a perspective view of a device in accordance with  
25 another embodiment of the present invention..

Figure 5 is a longitudinal sectional view of Figure 4.

## Best Mode for Carrying Out the Invention

The present invention will become more fully understood from  
30 the detailed description given herein below and the accompanying drawings which are given by way of illustration only, and thus are not limitative of the present invention.

As shown on the Fig 1., the present invention is related to a conventional eyeglasses 1 which has its constitutional structure as  
35 earpieces 7,7' having crooked end parts, a front eyeglass frame of a

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size and shape to fixedly support a pair of lenses 2,2' and frame having a centrally located nosepiece 3,3' positioned rearward of frame and particularly a plurality of air pocket 5,5' or micro air pockets on the cushion pad 4 of the inner surface of nosepieces 3,3' for the comfortable feeling and non-slippage on the saddle area of nose.

An explanation of the detailed constitution of the present invention will now be discussed using the forementioned configuration of the device of the present invention.

The materials employed in the nosepiece 3,3' under the present invention include harmless silicon or soften synthetic resin for the safe contact to human skin of nose. On the surface of nosepieces 3,3', these kinds of materials are used for making protruding air pockets 5,5' on the surface of cushion pad 4.

Depend on the functional demands or schemes for the design of nosepieces, the air pockets 5,5' can be formed to divide into rows or columns on the cushion pad 4. More sophisticatedly, the miniaturized air pockets could be shaped on the inner surface of cushion pad 4 having a protruding configuration of spines like thorns of cactus (Not shown on the drawings). In other words, the shape of air pockets 5,5' could be achieved in various ways according to the present embodiments of air pockets on nosepieces.

When one wears eyeglasses, the air pockets 5,5' formed on the nosepieces 3,3' are configured so that the protruded air pockets 5,5' can slightly wrap the skin of nose partially and circulate the air between air pockets contacted on the skin of nose.

On the other hand, as shown on the Fig 3, the attaching plate 6 combined with air pockets 5,5' approximately central portion of the cushion pad 4 is attached to the wearer's nose so that the eyeglasses can not slip down effectively from the nose. Of course, the above mentioned attaching plate 6 can be combined with a cushion pad 4 in an unitary shape or an assembly type for comprising nosepieces 3,3'.

The oppressive feeling on the nose caused by the weight of eyeglasses 1 is reduced whereby a pair of nosepieces 3,3' are tightly attached on the saddle portion of nose by the means of air pockets 5,5' whenever one use the present invention. Accordingly the present

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eyeglasses has excellent contact feeling on the nose and functional advantage for preventing slippage of eyeglasses. Herein below the mechanism of the present invention is described in detail.

Air pockets 5,5' on cushion pad 4 set on the inner part of the  
5 nosepieces 3,3' are closely attached to the saddle portion of nose so that the dispersion of the weight through the air pocket on nosepieces 5,5' can relieve oppressive feeling and burdensome from the pressure of eyeglasses. And also the air pockets 5, 5' formed on the cushion  
10 pad 4 provide securely the attractive force between the above mentioned nosepieces 3,3' and the saddle portion of nose. Accordingly the protective function of slippage can be achieved in effective way with excellent feeling for wearing glasses. On the other hand, the entire portion of nosepieces 3,3' is not closely attached on the skin of nose by means of air pockets 5, 5' . Resultingly the empty  
15 space formed between air pockets 5,5' and nose contributes circulating of the fresh air, protecting skin of nose and reducing any uncomfortable feelings or stress from the wear of eyeglasses.

Futhermore, as shown on the Fig 4 and Fig 5, for the high adherence or circulation of fresh air between nosepieces of  
20 eyeglasses and skin of nose having a protective function of slippage and comfortability of nosepieces, various shapes of air pockets 5, 5' on the nosepiece can be derived under the embodiment of present invention.

25

#### Industrial Applicability

The present invention is very useful for providing high attractive force between the skin of nose and nosepieces of glasses by means of air pockets on the cushion pad of nosepieces. Consequently, the  
30 effective protection for slippage or dropping of eyeglass is enhanced from the nose of wearer. In addition to the effect, various shapes of air pockets on the surface of cushion pad can disperse the weight of eyeglasses so that uncomfortable feeling, stress or oppressive awareness can be relieved in effective way. Furthermore the  
35 adherence of nosepieces on the human face having a suitable

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position affords to sustain the focal length of eyes of wearer.

The invention being thus described, it will be obvious that the air pockets on the nosepieces may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention, and all such modifications of air pockets as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.

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Claims:

1. A pair of nosepieces for conventional eyeglass comprising:  
a plurality of said air pocket 5,5' consist of silicon or soften  
5 synthetic resin on said cushion pad 4 of the inner surface of  
nosepieces 3,3' for the comfortable feeling and the no slippage from  
the nose on the surface of said cushion pad 4 and said air pocket  
5,5' formed on said cushion pad 4 are shaped so that the protruded  
said air pocket can slightly wrap the skin of nose partially and  
10 circulate the air through said air pocket contacted on the skin of  
nose.
2. A plurality of said air pockets on nosepieces as defined in claim 1,  
wherein said air pockets be formed to devide into rows or columns on  
15 said cushion pad 4 for the purpose of the design or function of  
eyeglasses.
3. A plurality of said air pockets on nosepieces as defined in claim 1,  
wherein said air pockets having a plurality of miniatured protruding  
20 spines like thorns of cactus on the inner surface of cushion pad 4.
4. The nosepiece as defined in claim 1, wherein said attaching plate  
6 combined with air pockets on the cushion pad approximately central  
portion of the cushion pad 4 is attached to the wearer's nose so that  
25 the eyeglasses can not slip down effectively from the nose in an  
unitary shape or an assembly type for comprising nosepiece 3,3' .

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**AMENDED CLAIMS**

[received by the International Bureau on 26 April 2000 (26.04.00);  
original claims 1-4 replaced by amended claims 1-2 (1 page)]

1. A pair of nosepieces for conventional eyeglass comprising :

a plurality of said hemispherical air pocket 5,5' made silicon or soften synthetic resin on said cushion pad 4 of inner surface of nosepieces 3,3' for preventing slippage and comfortable feeling are shaped so that the protruding said hemispherical air pocket can slightly wrap the skin of nose partially and circulate the fresh air between said hemispherical air pockets contacted on the skin of nose ; and

Characterized in that

said hemispherical air pockets are integrated on said cushion pad 4.

2. The nosepieces as defined in claim 1, wherein said attaching plate 6 combined with hemispherical air pockets on the cushion pad approximately located on the central portion of cushion pad 4 is attached to the wearer's nose so that the eyeglasses can not slip down effectively from the nose in an unitary shape or an assembly type for comprising nosepieces 3,3'.

**AMENDED SHEET (ARTICLE 19)**

## Statement under Article 19 (1)

We are herein below briefly explaining the amendment and indicating impact that such amendment might have on the description and the drawings.

### - Explaining the amendment ;

The original claims 1 to 4 are replaced by the amended claims 1 to 2. In the new set of amended claims, any relevance related to the citations in the Search Report are excluded by neglecting embodiments of the drawings numerated from Fig 4 to Fig 5. Therefore any invention mentioned on the drawings of Fig 4 to Fig 5 are not claimed in the new set of claims.

### - Indicating impact on ;

#### Drawings

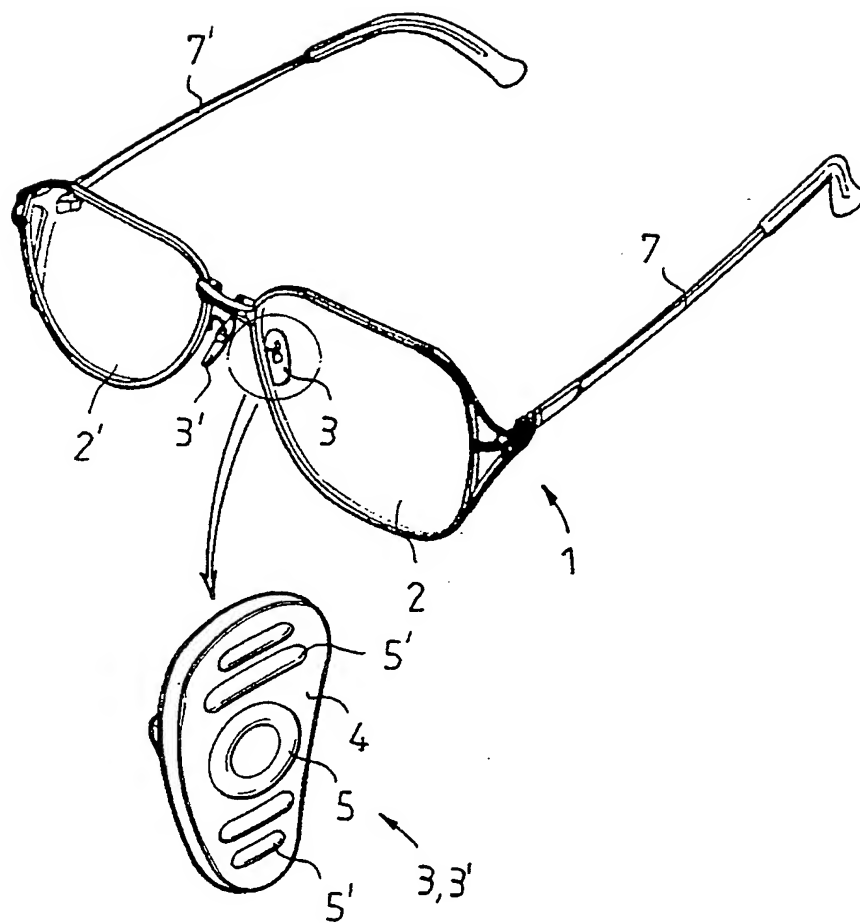
Originally there were 5 drawings. According to the new set of amended claims, the embodiments of drawings numerated from Fig 1 to Fig 3 are only subjected to the new set of amended claims. The other drawings numerated from Fig 4 to Fig 5 are nothing to do with the new set of amended claims.

#### Specification

Consequently, any descriptions or illustrations in the specification related to the drawings numerated from Fig 4 to Fig 5 can be neglected according to the new set of amend claims.

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Fig 1



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Fig 2

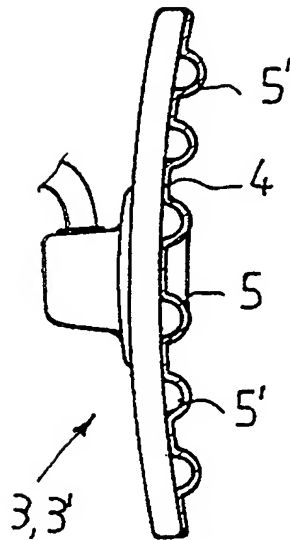
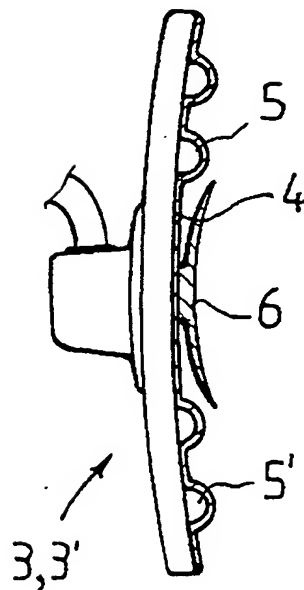
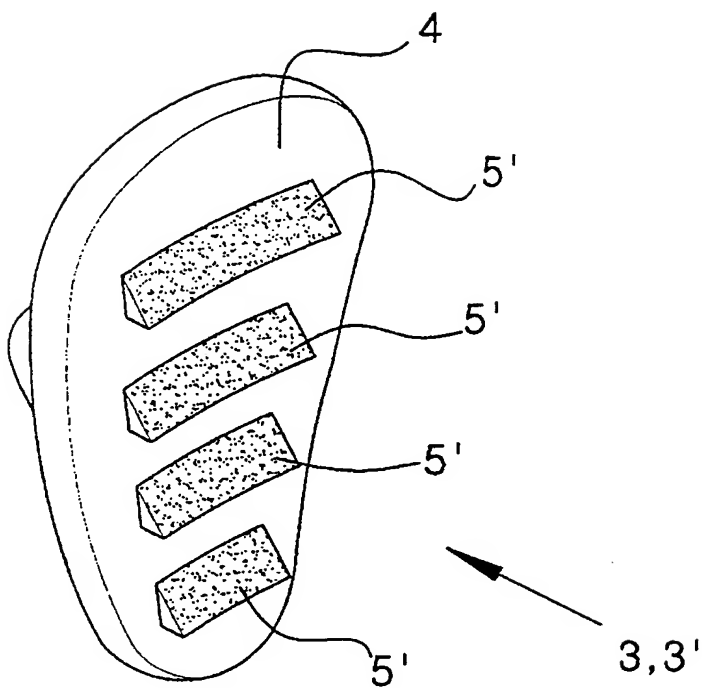


Fig 3



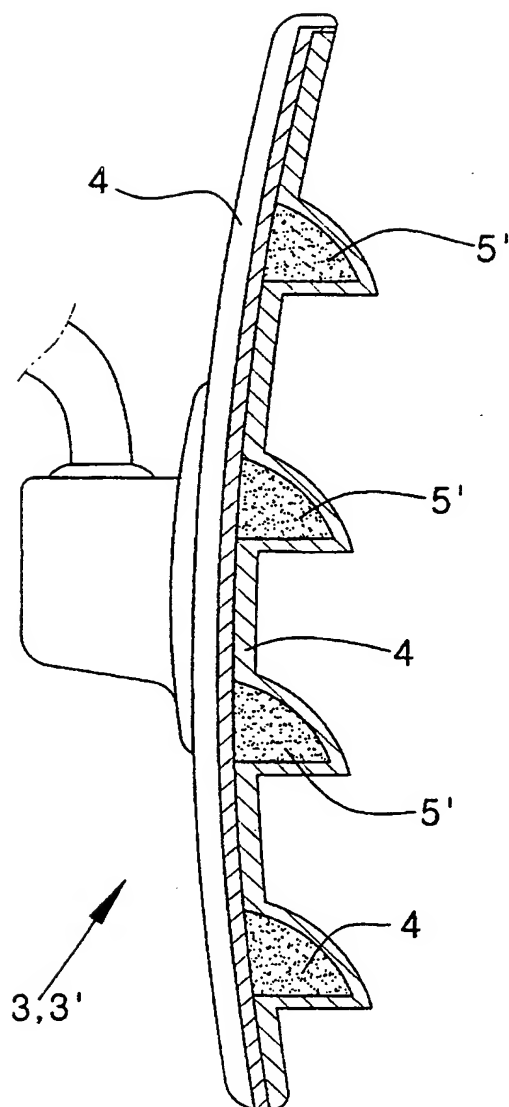
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Fig 4



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Fig 5



# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 99/00753

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: G 02 C 5/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup>: G 02 C 5/02, 5/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 4070104 A (RICE) 24 January 1978 (24.01.78) column 1, line 20-30; fig. 1.-7.	1,2 3
Y A	GB 468443 A (GRIER F.L.) 05 July 1937 (05.07.37) page 1, line 96 – page 2, line 50.	3 1,2
Y A	US 2032843 A (GRIER F.L.) 03 March 1936 (03.03.36) fig. 1,2,5,6.	3 1,2
A	US 4964716 A (COMBS) 23 October 1990 (23.10.90) column 2, line 46 – column 3, line 60.	1,2
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☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Date of the actual completion of the international search

25 February 2000 (25.02.00)

Date of mailing of the international search report

03 April 2000 (03.04.00)

Name and mailing address of the ISA/AT

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.  
PCT/KR 99/00753

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
US	A	4070104	24-01-1978	CA	A1	1096211	24-02-1981
GB	A	468443a				none	
US	A	2032843a				none	
US	A	4964716	23-10-1990			none	



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